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Original Articles.

CAUSE OF HEART FAILURE, BRIGHT'S DISEASE, AND CHRONIC DISEASES GENERALLY.

By N. B. SHADE, M. D.
WASHINGTON, D. C.

THE frequent deaths of late, said to result from *heart failure* and *Bright's disease*, are startling. The terms "heart failure" and "Bright's disease" are calculated to hide a multitude of diseases; even as magnanimously as the Scripture, which sayeth, "Charity hideth a multitude of sins."

The only explanation that will account for the assertion: "He died of Bright's disease," is deception or ignorance on the part of the physician, ninety-nine times in every hundred cases. I dare say that a majority of the medical profession will bear me out in the assertion, that scarcely the one-hundredth of the deaths, said to result from Bright's disease, are really caused by the disease of the kidneys discovered by Dr. Bright many years ago. Physicians unhesitatingly diagnose Bright's disease without the use of the microscope; when they know, at least regular physicians should know, that it requires a microscope with 250 to 300 diameters magnifying power to see the tube-casts peculiar to the disease; and that this is the only reliable test, without which no one can diagnose Bright's disease.

It would be interesting indeed to know what percentage of our noble profession understands how to make a microscopical examination, or how many even own a microscope that will reveal the tube-casts in Bright's disease; to say nothing of the 500 to 600 diameters required to see the bacillus in tubercular sputum. Yet how many of us will make out a diagnosis by a glance at the tongue, feel the pulse, and possibly test the urine by heat and acid only, and pronounce it a case of *Bright's disease;* especially how easy to come to this conclusion if we think the case is going to die—heart failure often thrown in.

In many other cases it seems just the thing to do, to pronounce the case "heart failure" while there is no such disease recognized in *scientific medicine*,—possibly because everybody who has died did so on account of that organ ceasing to perform its functions.

It is time that we were knowing more about idiopathic diseases; origin, predisposition, susceptibility—whether inherited or acquired. In the majority of heart and kidney troubles a susceptibility to develop the disease is acquired. However, the temperament and diathesis may be inherited only to a degree. For instance, a man may inherit a nervous-bilious temperament, and possibly a full habit, which represents the majority of our literary men, politicians and statesmen, who, with proper diet and management of the physical system so that the secretions are properly eliminated through their normal channels, may live out their allotted time of "three score years and ten." But if, instead, the secretions of the system are sluggish and in addition the sedentary life is his lot,

how easily the constitution is undermined by an overloaded and sluggish glandular system and a heavy volume of blood, caused by a vitiated chyle because the contents of the alimentary canal are retained too long and is ever and anon in a crowded condition, only slightly relieved by a small defecation daily—if that often—perchance. Some little head trouble occasionally or a fullness of the abdomen possibly accompanied sometimes with eructations, indigestion, etc., may be all the inconvenience suffered for months and even for years before alarming symptoms appear.

I have discovered in twenty-three years experience that a retention of the contents of the alimentary canal produces more or less fermentation and the kidneys are required to eliminate secretions that should have passed off by the rectum, if there is a uric acid diathesis—which is almost invariably the case in the full habit and sedentary lived person—it will be discovered that fatty degeneration of the heart or kidney trouble, possibly both, will surely develop.

The chyliferous vessels are under the necessity of carrying the vitiated chyle (nutriment) into the right heart where it intermingles with the venous blood and immediately pumped into the lungs for renovation, oxygenation and purified, as it were, before it reaches the left heart, when it is recognized as arterial blood and is sent on its mission of nourishing the tissues of the physical system. It should be very readily recognized how the law of osmosis is interferred with on account of the heavily loaded volume of blood. The lungs are burdened with the task of throwing off the carbon, excrementitious matter, and poisonous gases which the chyliferous vessels carry into the circulation from the duodenum, so that secretions not disposed of through the normal channels necessarily find the only source of exit through the chyliferous vessels, heart and lungs, which organs suffer in proportion to the length of time exposed to the unwholesome mass of vitiated blood, chyle and fermented garbage from the alimentary canal. It is easy to imagine what effect this condition of the secretions would have upon the organs mentioned. The kidneys are especially overworked, distilling fluids unwholesome, most foul and poisonous. Month after month and maybe year after year this abnormal condition of the secretions is allowed to go on until all resisting power is gone and the strong man must succumb to the continual "dropping of the water which wears away the rock," and a general breaking down of the system is the result. The heart and lungs, possibly one or both, gives way, producing shortness of breath, indicating generally that the law of osmosis is impeded and the blood cannot pass through the lungs fast enough to allow the heart free action; so we have regurgitation, the blood coming back on the heart, which often produces dilatation and a flabby condition of the organ, as in the case of the late James G. Blaine.

Many deaths are caused in this way; in other cases the blood frequently rupturing the walls of the blood vessels and finding way into the bronchial tubes and producing hemorrhage, as no doubt was the cause of Benj. Butler's death. It may be that the walls of the arteries are somewhere else ruptured, possibly in the brain or spinal cord, producing paralysis, "a stroke", apoplexy, which terms are synonymous; or it may be the kidneys lose their function and the patient suffers with uremia, which is nothing more than blood poison. In fact the majority of cases, such as I have indicated, suffer more or less with uremia; because the kidneys have been overworked in eliminating excrementatious matter for so long a time, that a real tissue change has taken place in the kidney and producing organic disease of said organ. Uremia, toxemia and coma follow each other, mostly, very rapidly as in my mind no doubt was the cause of the death of James G. Blaine, complicated by dilatation of the valves of the heart.

In the cases I have enumerated, it is more than probable that we may have just such conditions appear as will lead the physician to attribute death to heart failure, because the heart is affected or Bright's disease, because the kidneys have lost their function or there may be a fatty degeneration of both heart and kidneys, because all the symptoms and pathological conditions may be caused by rentition of the secretions as I have tried to bring out in this condensed ar-

ticle. In other words, a susceptible condition to develope the symptoms and diseases I have mentioned, is produced by not getting rid of that which is retained in the physical system.

This residue is allowed to remain to ferment and decompose and pass into the circulation. What matters it whether my patient's principal systems indicate heart trouble, kidney disease or apoplexy, when the development and final result of the disease depends on the condition of the secretions, which have by this time produced an entire change of the mucous membrane of the entire body as well as of the cellular tissue, arteries, nerve centers, etc. The fact is that unless we succeed in cleansing the mucous surfaces and keep them clean, and stimulate the glandular system sufficiently to carry off all surplus secretions and thereby get back to a normal condition before the patient's resisting power is all gone, but little if anything will be accomplished in removing the cause from which almost all chronic diseases derive fertilization and development. What is to be done? Common sense and good judgment come to our rescue and suggest that the inside of the body, the mucous surfaces, be kept clean from which all nourishment for the body is directly secured. As long as this is not done there is more or less preparation going on in the system, in the way of susceptibility, or predisposition to the diseases I have already suggested; or a general giving way of the whole system showing itself in one of the said affections. I suggest that a person in full habit, uric acid diathesis or not, though of a somewhat constipated habit whether occasionally or habitually, should use hot water and a refined magnesia or seidlitz salt, a cup or more of the menstrum every day in the morning on an empty stomach to wash out the convolutions and folds of the stomach and intestines. This I hold is as important and much more so, in my estimation, than cleanliness of the exterior of the body. *The mild antacid or seidlitz salt and hot water is to the inside of the body what soap and water is to the outside.*

In addition to this washing or flushing of the stomach and duodenum with hot water and a seidlitz salt every morning, preparatory to the stomach and bowels' work of receiving and assimilating food during the day. I also advise in many cases flushing the colon with as much hot water as can be taken conveniently by enema twice or thrice weekly, which I have used for twenty-three years. Especially do I recommend both in a person of full habit and whose system is heavily loaded with excrementatious secretions, etc. Possibly after a while he can manage his case very well with the flushings per enema alone or the flushings per stomach with the hot water and a little magnesia or seidlitz salt. In those of a less full habit I find the flushings per enema are quite sufficient in not only relieving the crowded condition of the alimentary canal and superinduce peristalsis, but also relieving a crowded condition of the abdominal cavity, relieving displacements of the bladder, pressure of the prostate gland and kidneys, indigestion of the bowels, etc. Also in many other troubles peculiar to the female sex where a crowded condition of the abdominal viscera produces womb displacements, irritable ovaries, hemorrhages, and a host of complaints too numerous to mention at this time.

While cleansing the whole line of the tract of intestines, as I have indicated already in many cases, the glandular system needs stimulation in order that the functions of the system may resume a normal condition, depending entirely on the requirements indicated by conditions peculiar to the temperament and diathesis of the patient.

I desire to impress the idea that good common sense exercised in the way of using preventive means or medicine is the rational thing to do at this age. I most sincerely believe that the time is coming and is now really beginning to dawn upon us, when longevity will be the rule and not the exception, depending on cleanliness of the inner as well as the outer man, and when we will—as some now are doing, viz.: anticipate disease and dangers ahead, by taking preventive medicine. How much more rational to take preventive medicine to keep well than to wait until disease has succeeded in making inroads upon us, undermining the constitution. Every intelligent person should consult a physi-

cian while in health as to the dangers that lie ahead in his pathway, possibly marked out by his ancestors. And if he has not inherited a predisposition to disease he should know what diseases he may be in danger of acquiring, so that good common sense precautions may be exercised if no preventative medicine is needed.

The scripture, "know thyself," applies very well to the intelligent management, in understanding how to keep the system in such perfect order that not sufficient fertilization from the alimentary canal is retained to entertain and develop the germs of disease, with which we necessarily come in contact daily.

In conclusion let me say that when we have succeeded in disciplining the laity with the great necessity of consulting a physician when in health, *how to keep well*, instead of telling them they need no medicine or advice when "an ounce of prevention is worth a pound of cure." Then, and only then, will we have reached the zenith in scientific medicine which is God given, and have acquired fame in the greatest science on earth vouchsafed to men.

WASHINGTON, D. C.

FEEDING OF THE INFANT.

By HERMAN D. MARCUS, M.D.

[Resident Physician Philadelphia Hospital.]

THE question of feeding the new born infant is probably the most vital one in the happy household. How often do we hear the statements that: "My milk has run out!" or "I have no milk for my baby," and so on. There is no doubt that the proper feeding of the babe becomes at times of the greatest importance, and the proper disposition of this question has a great deal to do with prolonging the child's life and keeping it healthy!

About ninety-five per cent. of all the diseases to which the new born babe is heir to may generally be reduced to some error in its diet. Where the baby has not the advantage of its mother's milk, and where the services of a wet nurse can or will not be secured, and the question of artificial nourishment must be considered, the physician has undertaken to supply the child with such food as will best help to keep up its health.

There cannot be any rules laid down as to the amount and strength of the milk to be given, whether to use it sterilized or peptonized, whether to employ condensed milk or one of the many infants' foods in the market. While one child may thrive on one mixture, the same food given to another child will cause a state of alimentary disturbances, which may lead to an extensive use of paregoric and soda mint by the mother, and the free use of calomel by the physician. The only rule in regard to feeding the child is regularity. No matter what mixture the physician may prescribe, he must insist on having the child fed at proper intervals.

The best substitute for mothers' milk is undoubtedly cows' milk, although the milk of other mammals has been found quite a good substitute. Asses' milk is used extensively in some of the southern countries of Europe and goats' milk is in great demand in the mountainous regions of the continent.

If cows' milk is used we must pay strict attention to its purity. The milk should be tested at odd times and a careful watch must be kept to prevent some unscrupulous dealer from supplying a mixture of chalk and water to the family.

The testing of milk is not a difficult matter, although the average physician may find some trouble in making a thorough *scientific* examination.

Good milk should be neutral or slightly acid and be of a certain sp. gr. Dr. Parkes has arranged a table which shows the sp. gr. of milk at 60° with the addition of different quantities of water as follows:

	Sp.	Gr.
Original,	1035.5	1025
9 milk and 1 water,	1027	1023
8 " 2 "	1024	1019
7 " 3 "	1021	1017.5
6 " 4 "	1018	1016
5 " 5 "	1015	

A very frequent mistake made is the too free dilution of the milk. We must make the artificial food as nearly alike to mothers' milk as possible.

Vernois and Becquerel, in analyzing human milk, find the percentage of caseine and sugar to be nearly alike to that of cows' milk, a claim which most writers repudiate. Thus the analysis of Vernois

and Becquerel shows that mothers' milk contains the following percentage of:

Fats	2.666
Caseine	3.924
Sugar	4.364
Salts	.138
Water	88.908
	100.000

while if we compare this analysis with that made by Dr. Meigs of cow's milk we find the following:

Fats	3.544
Caseine	4.405
Sugar	4.278
Salts	.764
Water	87.009
	100.000

thereby showing that the amount of caseine and sugar contained in mothers' milk is nearly alike to that of cows' milk.

There is a question that this is wrong. Mothers' milk contains undoubtedly less caseine and more sugar than cows' milk. To make cows' milk as near alike to mothers' milk as possible we must then decrease the amount of caseine and increase the amount of sugar. Pure rich cows' milk (sp. gr. 1030) should be at least diluted in proportion of two parts milk and one part water, or, which is still better, equally diluted for new born babes.

The amount per diem and the frequency of the feedings should be carefully regulated. Bouchard, of the Paris maternity hospital, thus recommends the following table:

1st day	1 ounce
2nd "	5 "
3rd "	14 "
4th "	17 "
After 1st month	20 "
" 3rd "	23 "
" 4th "	27 "
6th to 9th "	30 "

This table is a little underestimated, and it may be well to go a little above this amount, thus giving a babe of one month about 24 oz., at two or three months about 30-35 oz. and so on.

The child fed during the first month every two hours by day and about three times by night, should at the age or six months be fed about 6-7 times daily, and once during the night, necessarily increasing the strength and quantity of each feeding.

Of late years the use of condensed milk has been greatly advocated, and while showing some excellent results in isolated cases, it will be found that where good rich cows' milk can be procured, and where this milk is given properly the results will be far better than those obtained by condensed milk.

In hospital practice, especially where foundlings are admitted, the question of proper feeding becomes even more serious than in private practice. The babe born, no matter under what surroundings, will be less apt to be reduced to "a bag of skin and bones" if in care of its mother, but the poor foundling picked up in the gutter or on the housestep, will, when received in the foundling hospital, give the physician some thought.

Such a child is generally in a very debilitated condition, suffering from marasmus, intestinal or gastric disturbances.

Cows' milk alone will generally be found insufficient and for such cases we must use more nourishing food, food which will help the child regain its strength and health quickly I have found that in these cases as well as such which on account of some constitutional disturbances have lost weight rapidly, bovinine is very beneficial. Although not favoring beef extracts and preparations as an adjunct to infants' food the purity and excellence of this article has led me to prescribe it quite extensively. Bovinine when given to children acts as no other beef preparation does, quickly correcting any intestinal disturbances, the child regaining its strength and we soon find in place of the puny, wasted child a well nourished healthy babe.

Bovinine is a liquid beef preparation containing the very elements neccessary to bring back the lost vitality.

Dr. Gray, of the U. S. Army Medical Museum, in making a microscopical examination of bovinine, found it free of fibrin or bacteriæ, and especially rich in red and white corpuscles, fat globules, crystals of leucine and tyrosine.

I have used this preparation in quite a number of children suffering from the marasmus, gastritis, and intestinal disorders, and I have found it to be of the greatest benefit in combating these so common diseases.

Thus when bovinine is combined with proper milk, the child will generally regain its strength and soon be on the road to recovery, and out of all danger of fall-

ing a victim to the ravages of mal-nutrition.

The dose generally used ranges from 3-8 drops with each feeding, gradually increasing the amount.

In conclusion, I wish to draw attention to the proper hygienic conditions necessary to the health of the child.

Plenty of air and warm clothing, or to quote the old saying. "Head cool, feet warm," will be found equally important factors to the well being of the "King of the Household."

Special Article.

INVOLUTION FORM OF THE TUBERCLE BACILLUS AND THE EFFECT OF SUBCUTANEOUS INJECTIONS OF ORGANIC SUBSTANCES ON INFLAMMATIONS.[1]

By SAMUEL G. DIXON, M. D.

PROF. ROBERT KOCH announced in 1882 the discovery of the cause of tuberculosis. He claimed that consumption was produced by a *peculiar bacillus of a special shape*. This he described as a rod-shaped micro organism with rounded ends, either straight or curved, and frequently beaded. This simple form was accepted as a constant character until the summer of 1889, when I first observed, in an artificial culture on an Agar Agar glycerin nidus a slight inclination to bud in one or more places along the rod without the production of any particular angle, some relations forming an acute while others formed a right or possibly an obtuse angle. A single bud could only be recognized with a high power objective focused and illuminated with particular nicety. The indications, however, were so often repeated in each field as the slide was moved upon the stage of the microscope that I was sufficiently convinced of the presence of branches to review the life-history of the tube in which they were found and to speculate upon the factors likely to have brought about the evident volution. The result was the production of germs with decided *branches*, some of which were quite as long as the parent rods or stems.

This result was published in the *Medical News* of October 19, 1889. In 1891, Prof. Allen J. Smith, observed branched forms of tubercle bacilli in human sputum. Since then Prof. Klein, Herren Fischel, Mafucci et al, have described the branching of this germ. In the summer of 1892 I observed the bacillus in this cycle of life in the liver of the Green Jay of Mexico, *Xanthoura luxosa*. This discovery, coupled with my observations of 1889, and corroborated by the statements of other scientists, must now compel the the bacteriological world to recognize a more complex form of the tubercle bacillus than that observed by the great German bacteriologist in 1882. Since the discovery of the branched form of the tubercle germs in 1889, I have been able to continuously reproduce them on artificial mediums. While the young germs seem to be quite simple in form, appearing in straight rods and rods bent upon themselves, those which have arrived at the age of four weeks, particularly in the presence of an excess of glycerin and in a temperature of 40° C., become branched. The young bacilli, when introduced into the animal tissues produce tuberculosis, while the older cultures gradually lose their virulence, in all probability owing to their inability to reproduce themselves. This fact indicates that the branched form represents an involution life-cycle of the germ. Notwithstanding the fact, however, that the devitalized, dying or dead bacilli cannot produce consumption, they, with their products, effect a decided increase in tubercular inflammation, which inflammatory process even results in necrosis of the tissues. These phenomena led to investigations proving the correctness of the hypothesis first published in my Monograph on Immunity (*Medical News* of Oct. 19, 1889) to wit: "It is possible that by a thorough filtering out of bacilli from tuberculous material, a filtrate might be obtained and attenuated so that by systematic inoculations a change might be produced on living tissues that would enable them to resist virulent tubercle bacilli.

In this line of experimentation I proved that the presence of the germs was not necessary to produce the hyper-inflammatory condition of the tuberculous tissue but that it was a *product* of the bacillus that caused the reaction upon

the tuberculous animal tissues. This, since called *Tuberculin* and introduced into the human economy for the purpose of curing tuberculosis when introduced into animals suffering with artificially produced tuberculosis. often destroyed the condition called consumption and in many cases appeared to produce immunity to the poison of tuberculosis." The process, however, was not quite so successful in animals which had contracted tuberculosis through one of the natural channels. In these cases tissues surrounding that which was recognized as tuberculous afterwards became infected with consumption. While this was and still is discouraging we have good reason to believe that *Tuberculin* will be permanently established as a remedy for this pathological condition. The toxic albumose causing inflammation of tissues markedly tuberculous, coupled with the fact that it is found in such tissues, led me to inquire whether or not some other constituents of animal tissues, pathological or normal, would produce reaction if introduced in excess into the general circulation. This line of experimentation was begun by first using an albumose of the goat, a comparatively immune animal. This material, however, if at all active as a remedial agent in tuberculosis, is so slow in its effects that I have heretofore failed to produce any marked changes. When, however, in the course of my investigations I overloaded the animal system with some of its waste products, Dr. William L. Zuill, M. D., D. V. S., who has kindly carried on the clinical work on animals for our Bacteriological Laboratory reported in THE TIMES AND REGISTER of September 26th, 1891, a reaction by the Amide group on inflammatory tissues, the animals experimented on being tuberculous. As this group included that which we believe to produce the inflammation of gout, I was led to review my experience with tuberculosis in relation to lithemia. Studying this field with the lithemic and tuberculous habits in view I was soon impressed with the fact that when these diseased conditions were present at the same time in any individual we could claim it to be an exception to the rule.

To determine the special action of the Amide group upon inflamed tissues when introduced into the circulation, a case of Lupus vulgaris was selected and first treated by the subcutaneous introduction of .03240 gm. of kreatinin, alternated twice weekly with .130 gm. of taurin, urea and uric acid. The average temperature during treatment was slightly raised, though not to any very marked degree, under the influence of such small doses. The more recent patches of lupus, however, became markedly inflamed, being accompanied with a burning sensation. On the third day after the first injection, a marked granulation could be detected around the outer edge by the aid of a strong amplifying pocket glass. This apparently healthy granulation has continued for ten days, in which time the patch has one half of its original area healed. The result shown at this early stage of the experiment is sufficiently encouraging to warrant not only a continuation of the treatment in this case but in other forms of tuberculosis. The only other subjects upon which these injections have been tried have been cases of pulmonary tuberculosis in a very advanced stage, where there was too much lung-tissue already destroyed to warrant the expectation of a favorable result. The fact that we apparently have an action on the lupus and no marked result with *small* doses on advanced cases of pulmonary tuberculosis causes me to realize that the line of experimentation must not be confined to tuberculous inflammation, but extended to the action of these organic substances on the entire group of inflammatory growths, the effect being produced, possibly, by supplying that in which the pathological tissues are deficient. This line of inquiry, which had its origin in the Bacteriological Laboratory of the Academy, has opened up a new and wide field of important scientific medical investigation. The main object of this communication, at this time, is to confirm the original discovery of the *branched form* of the tubercle bacillus by recording the observations of the same life-cycle of that micro-organism found in animal tissues. I have, however, ventured to advance theories and results regarding the action of substances far removed from the bacillus, because they were suggested during my studies of the branched form of that organism.

[1] From the Proceedings of the Academy of Natural Sciences of Philadelphia, February 21, 1893.

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A Weekly Journal for Medicine and Surgery.

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THE MILK BILL.

THE bill now before the Pennsylvania Legislature for the regulation of the milk supply, presents some features that demand more than a passing notice. That any legislation tending to secure purity and excellence of this product is commendable, needs no demonstration; but it is seriously questioned whether the present bill is calculated to do this. The Philadelphia Milk Exchange has protested against it, denouncing the proposed Act as oppressive, unwise and discriminating. We will look at the bill in detail, and see whether this language is warranted.

The first section provides that all producers and dealers must procure a license. This places upon every farmer who desires to sell milk the tax of a license fee, as well as on every vender. It also creates a new and numerous class of officials, in the shape of inspectors, to be supported by the community.

Section 2 provides further that no producer or vender shall offer for sale or have in his possession any milk coming from an unlicensed producer or vender. This seems to shut out completely the product of the Jersey dairies, unless that State passes a similar law. As there is no qualifying clause as to the knowledge or ignorance of the vender, he will be compelled to decline any milk offered, unless the farmer carries his license to market with him; and even then the vender is liable, as the licensed farmer may sell the customer milk that has come from unlicensed herds. The vender is, therefore, compelled to rely on the honesty of the producer, and by so doing puts himself in danger of violating the law; though guiltless of wrong intent and powerless to avoid the wrong-doing through any exercise of forethought.

Section 3 extends the liability to employees.

Section 4 provides for penalties for infraction of this law. These consist of fines, up to $500, and imprisonment up to one year, with the utter ruin incurred by the publication of the sentence in the newspapers. And all this liability is incurred by *unknowingly* having in possession a pint of unlicensed milk! Should the law pass in its present form, there will be some milk routes for sale.

Section 5 places the appointment of milk inspectors, analytical chemists and dairy inspectors, in the hands of the Director of Public Safety, the local health boards, or the burgess, with as many assistants as the appointing power considers necessary. The chief dairy inspector must be a vet. or a doctor of medicine, and he may hold both inspectorships at once. Salaries are to be fixed by the mayor and councils, or the burgess and aldermen.

The value of such a privilege of unlimited appointments in case of a close

election is at once apparent. Ward primaries could be readily regulated by the appearance of a few hundred extra "milk inspectors."

Section 6 forbids, under heavy penalty, the sale of skimmed milk under all circumstances, whether alone or mixed with whole milk, whether sold as whole milk or simply for what it is; also milk from cattle fed on distillery products or from diseased cattle, or milk not up to the legal standard. Just why the people should be deprived of the privilege of buying skimmed milk if they want it is not easy to determine. Invalids for whom skimmed milk has been prescribed, as in Mitchell's diet for Bright's disease, must get a special permit to live, we presume.

Section 7 prohibits the sale or possession of condensed milk that has less than 25 per cent. of fat, or of milk that has less than 12½ per cent. of milk solids of which at least 3½ per cent. must be butter fat.

Section 8 places the officials appointed under the act under the control of the local health authorities.

Section 9 empowers the officials to take samples for testing.

Section 10 orders licenses to be taken out, within thirty days after the appointment of an inspector, for each place of sale or storage and for each vehicle used for such purpose. The premises must be inspected and their hygienic condition approved before the license is issued. The license may be refused or revoked by the authorities for violation of the law. The license fee for store or dairy is ten dollars per annum, and for each vehicle five dollars per annum.

Section 11 places the officials, in places where there is no local health board, under the control of the State Board of Health.

Section 12 gives to the officials the right of entry as far as needed to carry out the law, directs them to report promptly, and to examine from time to time all milch cattle for tuberculosis or other infectious diseases.

Section 13 provides that any diseased animal must be segregated, and prohibits the sale of its milk or flesh under penalty.

Section 14 appropriates $50,000 for the purpose of carrying out the Act; and also provides for valuing and paying for any animal condemned as tuberculous, the limit of value being placed at $40. If the animal when killed proves to be tuberculous, one third the assessed valuation is to be paid the owner. If the autopsy shows the diagnosis to have been wrong the whole sum is to be paid the owner. This extraordinary provision gives the inspector the right to slaughter the most valuable animals on suspicion, the State paying $40 each if no infectious disease is found.

Section 15 orders the registration of dairies within thirty days after the appointment of an inspector, the fee being $1.00.

Section 16 directs the name and registry number to be affixed to every milk can and vehicle.

Section 17 forbids interference with the inspector, and counterfeiting his seal; while the last section gives June 1, 1893, as the date at which the law goes into operation.

As a whole, the bill appears to us to be objectionable in many points. It renders the dealer criminally liable for circumstances over which he can have no control. This will tend to place the business in the hands of the less scrupulous dealers; to the detriment of the consumers. It will greatly limit the supply of milk, as but a small portion can be furnished at the legal standard.

Whenever the milk of any dairy falls below the standard, it must be destroyed, as the bill forbids its use, even for animals.

The supply will then be variable and uncertain, as any dairy is liable to find its milk occasionally below the legal limit. This, and the expense incurred by the provisions of the bill, must vastly increase the cost of milk to the consumer. The total prohibition of the sale of skimmed milk and of buttermilk has no warrant whatever in public policy. Both these are valuable and wholesome articles of food; and their use meets with no objection that cannot equally be urged against the use of milk and its products in every form. The provisions for slaughtering suspected cattle, place in the inspector's hands the power of destroying the most valuable herds, with no compensation worthy of the name; a power that may be used to gratify private enmity or to favor extortion. The provisions for the appointment of inspectors places in the hands of a few officials a privilege of enormous efficacy in practical politics, but equally objectionable to the interests of the community. The whole measure is calculated to foist upon the consumers, the farmers and the dealers in milk equally, a burden that neither class could bear; and we will be greatly surprised if a Pennsylvania legislature can be found that will impose such a law upon its constituents.

While several cities contested for the honor of Homer's birthplace, this practical age sees three cities competing for the acquisition of Professor Osler as a citizen. Jefferson Medical College made the most strenuous efforts to induce him to take the chair vacated by Da Costa; Montreal is now actively endeavoring to coax him back to McGill University; and Baltimore shows no trace of a disposition to part with him.

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FOR COUGH.—BLOOD PURIFIER.

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Syr. sarzae . . . . . q.s. ad Oj

M. S.—℥ss in one-half pint hot water, one hour before each meal.]

PECULIAR EPIDEMIC IN KENTUCKY.

WE are in the midst of, I had almost said, an epidemic, of—I don't know what. I shall give you the symptoms, and they are very few, and let you judge. We have had a very severe winter, and now, at its close, of course catarrhal troubles predominate; this as an explanatory introduction of some of the symptoms. The patients are all taken with high fever, 103° to 105° Fahr., cough, dry, or slight mucus, headache; *the chain of lymphatics just posterior to the sterno-mastoids on both sides enlarged and painful;* pulse in ratio to temperature; while the bowels, urinary organs, throat, lungs, liver, spleen, and, in fact, all other organs perform their functions perfectly. There is slight congestion of the bronchial mucous membrane, and this is all I find to account for the cough.

The cases recover slowly, with a disinclination of the lymphatic swelling to go down. The tongue is clean, or only slightly furred. What causes those lym-

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Mention this Journal

phatics to swell? My treatment has been tr. aconite, and sodium salicylate, with ichthyol ointment to the swollen glands. Can you suggest something that would hasten recovery?

We have in Marshall County, some seventy-five miles south of us, an epidemic of cerebro-spinal meningitis. Our Secretary of Health has ordered an investigation (by Dr. McCormick, of Bowling Green); and should the disease prove the so-called spotted fever, I have an idea of going down to try the effect of full doses of pilocarpine muriate. They have had about fifty deaths, and the people are getting terror-stricken.

R. H. C. RHEA, JR.

MORGANFIELD, KY.

[The glandular affection is peculiar, and is not described in any work at our command. The absence of bronchial, splenic, and lymphatic symptoms is characteristic of epidemic meningitis, according to Ziemssen. The high fever at the onset distinguishes this affection from the typhoid group; and were it to be placed here, we would find it occurring with typical typhoid cases, as an occasional variation. Altogether, we must look on this singular epidemic as a manifestation of influenza, modified, perhaps, by some local influences of which we have no knowledge. The glandular disease is due to either a vital or a chemical irritant; in either case derived from the surface whence lymphatic vessels proceed to these glands. A microscopic examination of the bronchial secretion, and of blood drawn from an enlarged gland, might afford some interesting information. In ordinary enlargement of lymphatic glands, we have found phytolacca, locally and internally, quite efficient; and would suggest its employment in these cases. Peroxide of hydrogen might also be applied to the respiratory and mucous membrane by means of an atomizer.—ED T. & R.]

Book Notices.

HAND BOOK OF INSANITY. By Dr. Theodore Kirchoff, Physician to Schleswig Asylum and Privat Docent in Kiel University. Published by Wm. Wood & Co., N. Y., 1893.

This is a well issued manual in clear type and with many most excellent features in the text, with some defects. The book is about equally divided between general and special parts, the latter being the more valuable, as the former is somewhat prolixly speculative on many points, though possessing evidence of much thinking and research.

Germanicisms are not sufficiently eliminated by the translation, but some German terms for which there are no English equivalents are properly retained. He is right in objecting to naming insanities according to the age at which they develop, but he errs in extending his objection to hebephrenia, for the very definite clinical symptoms it exhibits, combined with the puberty period at which it appears, fully justify the term, which by some alienists is also known as pubescent insanity. Senile dementia is also characteristic in its unvariable phases, though the mistake is often made of diagnosing many of the other insanities, to which the old are as liable as the young, as senile dementia, when they are merely mania, melancholia, etc., occurring in an old person.

He regards the criminal as merely a revert to the savage stage, and as on a par with others who have faults of development, such as are found in the insane and epileptics, in which he is justified by the Italian school; but as to genius being dependent upon a neurosis he is behind the times, for every mental gauge including mediocrity could be thus considered by the same reasoning. Goethe, Shakespeare, Bacon, were not neurotic, and the fact that Sam Johnson and others were so, is about as much to the point as that a large proportion of our fellow human beings suffer from rheumatism, gout or some other disease. Neuroses may afflict the highly intelligent as well as others, and not be either a cause or effect of such superiority.

Kirchoff rightly deprecates the faulty training of children, especially the rote teaching in schools (instead of developing their reasoning faculties), as mentally debilitating; but his statement that brain workers are more endangered than those who do manual labor is far from correct. He cites artists as especially liable to insanity. If this is the case, which I doubt, it must be due to emotional overstrain rather than brain work. The eternal dabbling with mythological conceptions worthy of a puerile age, "the divings after the unfathomable and soarings after the infinite," in which so many *uneducated* artists indulge, might foster the hysterical disposition; whereas the scientific painter or sculptor who has mastered, as part of his studies, Darwin's "Expression of the Emotions in Man and Animals," will understand the futility of

trying to portray expressions that never existed, and a little zoological knowledge would disgust him with such impossibilities as hexapod mammals, the monstrosities of centaurs and winged humans.

He says: "The absence of an occupation is also an efficient factor, as is illustrated by the frequency of insanity among tramps." As a rule, this is mistaking effect for cause. The tramp is without occupation all too often because he is insane, rendered so by heredity, disease, drink or other misfortune.

His discussion of the influence of disturbed sexual functions is good, but with regard to alcoholism he is quite uninformed, as he could learn from the writings of Clouston, Crothers and others.

He states that love disappointment seldom produces permanent mental disturbance except upon an hereditary basis, but he overlooks that in this respect it is on a footing with any other exciting cause. Some natures can cope with "hell, death and the devil" and come out right end up, while others tumble to pieces if they fall over a straw.

He deals with paranoia and paretic dementia quite fully and satisfactorily, and handles the treatment of insanity in general much better than does the average text book.

The experienced alienist will read the special part of Kirchoff's book with appreciation, but also will note many omissions. Atheromatous insanity, hebephrenia and several other psychoses are not treated of, while such ailments as stuporous and confusional insanities are described under misleading though old names of primary dementia.

On the whole, Kirchoff's work is an interesting addition to our psychiatrical literature, but does not come up to the standard of completeness of Krafft-Ebing, Spitzka or even the antiquated Griesinger.

S. V. CLEVENGER.
70 STATE ST. CHICAGO.

Celebrating the beginning of its twelfth year, the *Electrical Review*, of New York, published on February 25 a particularly interesting and instructive issue of nearly 70 pages. We quote the following from the introduction to a handsomely illustrated and well written description of the progress made in all branches of electricity during the past year:

"While the year which closes with this number of the *Electrical Review* has not been characterized by the production of any of the marvels in which the electrical prodigy has been so fruitful, it bears evidences of a steady march of improvement, signalized by the introduction of more perfect apparatus and an expansion of the field of application for electrical inventions the birth of which occurred at an earlier date."

Other valuable articles in this number of the *Electrical Review* are a description of the largest arc lighting plant in the world; an interview with Prof George Forbes, the great English electrician, in which much information about the transmission of electric power from Niagara Falls is given; "The Inventor," by Julian A. Moses, a very interesting description of the present status of "The Telephone," by Grosvenor P. Lowery, the celebrated patent attorney; "The Place of Electricity in the Modern Office Building," by an office building manager; "A Combination Electrode and Stand for Use in Static Electric Treatment," by Dr. Lucy Hall-Brown; "A Visit to the World's Fair," by Stephen L. Coles, and "The Durability of Underground Wires," by Herbert Laws Webb.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON ORTHOPÆDIC SURGERY.

[Stated Meeting, January 20th, 1893.—Henry Ling Taylor, M. D., *Chairman.*]

REFLEX SPASM ON "POINT PRESSURE."

DR. R. H. SAYRE presented a boy with congenital infantile spastic paralysis, in order to illustrate what he understood by contractured tissues, and by reflex spasm on "point pressure." This child had been seen by a number of gentlemen who had stated that nothing could be done to relieve his condition, yet the speaker was of the opinion that by proper treatment the child's condition could be improved sufficiently to enable him to walk without mechanical aid. He then demonstrated the existence of spasm

when "point pressure" was made on the contractured tendo Achillis. In his experience, the condition of such tendon was only made worse by stretching, yet tenotomy and the subsequent use of massage, galvanism, and faradism, will cause a decided improvement. He had seen cases in which spastically contracted muscles could be elongated sufficiently to allow of placing the parts in the normal position without producing reflex spasm, and in such, of course, tenotomy is not required. Thus, in a boy twelve years of age, who had been for a long time utterly helpless, he was able, by carrying out this line of treatment, to improve his condition materially, so that the boy could walk about the room now, and clothe and feed himself. He was not prepared to state just how tenotomy affected the condition of those muscles in which this reflex spasm was elicited, but it served to place the nervous system in such a condition that the patients were better able to co-ordinate, not only these muscles, but other muscles in the body.

The Chairman said that in previous discussions on this subject, he had not noticed any distinction made between cerebral and other palsies. In the case presented, the spasm elicited on point pressure might be one manifestation of the heightened reflex activity present in cerebral paralyses. Such deformities could often be temporarily overcome by stretching, but most orthopedic surgeons were agreed that most cases required tenotomy for their permanent cure.

Dr. R. H. Sayre replied that it was not claimed that this sign would enable one to differentiate between infantile spastic paralysis and anterior poliomyelitis, but as a result of observations on cases which had been stretched for periods varying from six months to three years without success, his father had found these cases invariably showed reflex spasm on "point pressure" when the tendons were placed on the stretch, and he claimed that all such shortened tendons, whether as a result of spastic paralysis, or of spinal paralysis, could only be permanently benefited by *division* of the tendon.

The Paralyses of the Sphincters in Pott's Disease.—A paper on this subject was read by Dr. Halsted Myers,

Pott's Paraplegia.—This was the subject of a paper read by Dr. R. H. Sayre.

DISCUSSION.

Dr. H. W. Berg said, that the value of Dr. Myers' paper consisted in the aid which it rendered in localizing the lesion of Pott's paraplegia. Some years ago he himself formulated a theory which he had thought would render assistance in the same direction. He divided the cases in which the bladder was involved into two classes, those exhibiting "conscious incontinence" of urine, and those showing "unconscious incontinence" of urine. From the existence of two opposing sets of muscles in the bladder—the detrusor and the sphincter—he argued the probable existence in the bladder or rectal centre of a separate set of motor cells for each of these sets of muscles. In order to be conscious that the bladder is becoming filled with urine, the sensory nerves of the bladder must carry this information up to the brain; hence, in addition to the reflex act of the centre itself, there is a voluntary control over all these muscles exerted by the brain through these centres. Now, a lesion may paralyze either the motor cells or the sensory cells of the centre; in the former case, there is a conscious incontinence, in the latter, unconscions incontinence. Again, any lesion involving the set of fibres passing from the sensory portion of the centre through the posterior portions of the cord of the brain, will be followed by unconscious incontinence of urine, while any lesion pressing upon the anterior or lateral portions of the cord will cause conscious incontinence of urine.

Dr. Royal Whitman said that the distinction made by Dr. Berg, as showing the existence of pressure at one or another part of the cord, could be of but little practical importance, as the pressure to be removed by operation was almost allways on the anterior aspect; an extension of the disease from the bodies of the vertebræ. It was also to be remembered that simple pressure was not the only element in the paralysis, for in many cases there was but little actual pressure, but rather an implication of the coverings of the cord in the extension of the tuberculous disease, causing, by interference with the circulation in blood vessels and

lymphatics, nutritive changes and subsequent degeneration.

In certain cases, paralysis was a very transitory complication ; in others, it was never or only partially recovered from. This difference might be explained in the one instance by simple pressure, in another, by the more serious implication of the coverings of the cord, with nutritive changes, or by inflammation and destruction of the elements by the tuberculous process. In considering operative interference, it would be important, if it were possible, to make out more accurately the extent of the disease, and the actual conditiou of the cord itself, as certain advanced cases must be hopeless from any point of view, while simple pressure as for example from abscess, as in the case mentioned by Dr. Myers, might be relieved by operation at an early period, with good result. Although recovery from the paralysis of Pott's disease might be confidently predicted in the great majority of cases under conservative treatment, this recovery was not always perfect. A certain amount of weakness and spastic rigidity might persist indefinitely. He could recall the case of a girl, now fourteen years of age, who had recovered from seven distinct attacks. She was now, two years after the last recovery, walking about, although there was still well marked spastic contraction of the legs. Her condition was, however, gradually improving.

Dr. Frederick Peterson said that the neurologist looked upon the paraplegia of Pott's disease as the most favorable of all organic spinal disorders, as a very large percentage recovered. It was very curious that cases which presented the marked symptoms ordinarily considered to be due to secondary degeneration in the cord, should, after the lapse of a year, recover entirely under conservative treatment. He agreed with Dr. Sayre that operative treatment should be only a last resort. He had been particularly interested in the cases reported by Dr. Shaffer, in which there had been a cessation of menstruation. It is well known that there is in all probability a parturition and a menstruation reflex centre in the lumbar region of the cord, but the process by which the cessation of menstruation was produced in these cases, is rather difficult to explain. Regarding the relative value of motor and sensory symptoms in determining the prognosis, he said that the paraplegia is due to compression or an inflammatory process, or to a combination of the two and that where the sensory symptoms are marked, the prognosis is not so good. This is because the motor functions being represented probably nearer the periphery of the spinal cord, they are the first to suffer when the Pott's disease is mild in character. When the compression becomes very great, then the sensory symptoms develop. Hence, the sensory symptoms are an important index of the extent of the lesion, and of great value in assisting us in making a prognosis.

Dr. Samuel Lloyd said that Lauenstein's rule, to which reference has been made in Dr. Myers' paper, was formulated for fractures of the spine, and was never intended to apply to Pott's disease. In the former class of cases, the rule undoubtedly was valuable, but it had been conclusively proven by a study of the cases of Pott's paraplegia which he had published in October that, it was inapplicable to this latter class. In Pott's paraplegia, it has been demonstrated clinically that incontinence may be present for a considerable period, and yet decided improvement would follow conservative treatment. It was stated in the paper that shock was one of the causes of incontinence. This is undoubtedly true, but shock in Pott's disease can only occur when the disease has advanced so far that there is a sudden dislocation, or where there is a rupture of an abscess into the spinal canal; shock such as this would hardly produce a lasting incontinence unless some permanent compression was caused by the accident. This had been shown in the cases of fracture of the spine which he had tabulated about a year ago, where it was proven that the cord recovered promptly and progressively from shock unaccompanied by any laceration or compression of the cord.

Regarding the overflow incontinence and the incontinence of the empty bladder, the speaker said that it was pretty well established that in cases of irritation of the cord where cerebral control is still present the reflexes are increased, and

this may easily lead to increased sphinteric action, and in that way to overflow. This would indicate the early stages of cord interference, and the fact that the pressure was as yet very slight, and not sufficient to shut off the cerebral control. On the other hand, where there is complete suppression of the urine, with paraplegia and anæsthesia, the indication is that the pressure had become so extensive as to abolish cerebral control, and hence, the reflexes also. He thought all could assent to the statement made by Dr. Sayre, that it was only in very exceptional cases that operation is indicated. Chipault, who has carefully reviewed this subject, comes to the same conclusion, and emphasizes the importance of constant mechanical treatment after operation, a point which has been very generally neglected. The large number of deaths recorded in the table which the speaker had himself published, could be explained by the fact, that many of those operated upon were cases in which there was degeneration of the cord; in other words, cases now considered unfit for operation.

Dr. Joseph Collins referred to a case of extensive meningo-myelitis with descending degeneration of the anterior and crossed pyramidal tracts, in which operation had been done, and very properly, for there was no reason for supposing in this case that the cord could be regenerated when the degeneration was so extensive. The patient died of septic pneumonia a few days later. Many neurologists to-day do not believe that there is any such thing as acute transverse myelitis, cases formerly going under this head, being considered as really instances of pressure myelitis. The first lesion is a meningo-myelitis, and not a simple anæmia of the cord. Indeed, the fact that the vessels of the spinal cord, one hundred and fifty to two hundred in number, are so small as to be nearly invisible to the naked eye, makes it highly improbable that anæmia could possibly cause the symptoms found in the early stage of Pott's paraplegia. The speaker endorsed what had been said about the inadvisability in most cases of resorting to operation. He thought it absurd to suppose that ergot or ergotine could cause sufficient contraction of these minute blood vessels to sensibly overcome the hyperæmia. If these preparations have any action at all on the blood vessels, it is to interfere with their nutrition, and, hence, with the regeneration of the affected fibres, and are, therefore, to be avoided. He wished to protest therefore against this very common method of treatment. Dr. Berg's theory, a modification of that presented by Gowers, was, in his opinion, unnecessarily elaborate. We know that in the lumbar cord there is a centre for the preservation of the tonus of the muscles in the lower extremity, which exerts a similar action on the bladder. There is also a centre for urination. In his recent paper on myelitis, there were cited cases of acute ascending paralysis with lesions of the posterior columns, and yet the bladder remained unaffected. In connection with the cases narrated by Dr. Schaffer, it was well to remember that it is claimed there is a menstruation centre situated opposite the eleventh or twelfth dorsal vertebra.

Dr. S. Ketch referred to the case of a boy who had been under observation for over five years, and who had had paraplegia during the greater part of this time. Up to last summer, it was complete as regards the motor symptoms, yet there had never been any urinary or rectal incontinence. He had been under strict mechanical treatment all the time, and last summer he had improved sufficiently to walk a little. At present, the reflexes are still exaggerated, and there is slight ankle clonus. Orthopedists in general hold the opinion that operative interference should be a last resort in these cases, and the propriety of this view was well shown in his case which he was sure would long ago have been submitted to operation by the advocates of laminectomy.

Dr. Berg said that in his remarks on the two forms of incontinence, he had not stated that such cells as he described, actually existed, but the symptoms observed were most easily explicable on such a theory. He would like to ask Dr. Sayre how often he had seen paraplegia before the development of the kyphos.

Dr. Anna M. Galbraith said that she had had one case of incontinence, due to inactivity of the lumbar centres, of four years' duration, which finally, under suitable treatment, terminated in complete recovery. Where electricity did harm,

there was probably an acute inflammation, which is always a contra-indication to the use of electricity.

The Chairman said that Dr. Lovett and himself, in a paper which they had published in 1886, were among the first to call attention to the comparative benignity of Pott's paraplegia under proper mechanical treatment.

Dr. Myers, in closing the discussion on his paper, said his cases showed that the connecting fibres between the brain and the reflex centres could resist pressure severe enough to practically abolish their function for a long time. He had had a recovery from paralysis of the bladder and rectum of four and a half months' duration, under conservative treatment, and had notes on two such cases cured by laminectomy after six months, and another history read as if the cure was gained after eighteen months.

The highly organized reflex centres themselves were only once affected, although most severe cases of dorso-lumbar disease were seen. The peripheral segment of the reflex arc had not been interrupted in any of his cases.

Unfortunately too few cases had been carefully reported to enable him to establish the prognostic value of the different varieties of this paralysis. He had never seen paralysis of the bladder and rectum without motor paraplegia, though it was not uncommon without note being made of sensory symptoms; therefore, he thought in the latter cases, the distinction of unconscious and conscious incontinence might be of value as indicating involvement or not of the posterior part of the cord.

In reference to Dr. Sayre's paper, he wished to mention a recent autopsy, where the cord was found compressed at the second dorsal by an extradural abscess, a thickened dura, and from being tightly drawn over the projecting bony angle anteriorly. Had laminectomy been done in this case, not only would this pressure not have been relieved, but there would have been a complete solution of bony continuity here, because the body of the second dorsal was entirely destroyed and the pedicle and laminæ were also affected. Rupture of the cord could not have then been prevented. Weakening the spine had been indefinitely referred to often, but this case showed it was a real danger, and one which could not always be anticipated, as externally this case did not seem a very severe one.

Dr. R. H. Sayre, in closing the discussion referred to the anatomical structure of the spine, and the difficulty of relieving the pressure by operation without removing to a dangerous extent the supports of the spinal column, and said that such measures were of very questionable utility except where it is known to be in the posterior part of the spine. Massage is a very indefinite term, and as often administered will only do harm; yet moderate stretching and gentle manipulation were beneficial in certain cases. The diversity of opinion regarding the utility of eletcricity is explained by the fact that here a large part of our treatment is empirical; whether mechanical, medicinal, or operative. He had seen patients improve under galvanism, and become worse when this was intermitted. In cases of Pott's disease where there was disturbed heart action and a marked involvement of the sympathetic, decided benefit had followed galvanization of the sympathetic. In two of the cases reported, the paraplegia had existed for a number of months before the kyphos was discovered, and in a third, the appearance of the kyphos was preceded by a partial paresis of one leg. He did not see why ergot should not contract small vessels as well as large ones; clinically, it had seemed to him to do good, and he had supposed its beneficial action was to be attributed to a diminution in the supply of blood to the cord.

The Medical Digest.

GERMAN NOTES.

TRANSLATED BY DR. AD. MEYER.

CHICAGO, ILL.

DUBOISINE is recommended by Prof. Mendel in cases of insanity with prominen motor restlessness, to produce relaxation of the muscles and consecutive sleep for two to six hours. He began with ½ mgr. ($\frac{1}{120}$ grain) in hypodermic injection, slowly increasing the dose to 1 mgr. In five minutes the muscles begin to relax and in twenty minutes sleep sets in. In melancholia, in quiet cases of para-

noia and in simple wakefulness it does not produce sleep. Signs of intoxication are: mydriasis and the accompanying disturbance of vision, dryness of the throat and acceleration of the pulse and of respiration, sometimes dizziness; hallucinations were not observed with those small doses. Mendel prefers duboisine in motor restlessness of the insane to the more dangerous hyoscyamine. An attempt in twelve cases of paralysis agitans showed a beneficial influence. In a few cases the tremor was removed within five minutes for about four to five hours, so that the patient could write a letter without much trouble. The dose is from two to four-tenths of a milligramme ($\frac{1}{300}$-$\frac{2}{300}$ of a grain). When given in the evening, it has often a beneficial influence on the sleep by diminishing the muscular rigidity. Patients who were treated with hyoscyamine before, prefer it to this drug. It is useless in epilepsy. —*Deutsche Medicinal Zeitung.*

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HYPEREMESIS GRAVIDARUM. — Dr. Edward Frank, who has made a very interesting and thorough investigation of this subject, arrives at the conclusion that hyperemesis gravidarum is the consequence of hysteria which existed before or developed during pregnancy. The alteration of the nervous system may be due to the pregnancy alone, or to a disease of the organism, especially of the genital organs The symptoms in the course of the disease are those of inanition. The prognosis is favorable as a rule, if the patients are treated in time. In the treatment we have first to remove a possible organic cause. Pure milk diet with absolute rest in bed will be sufficient in most cases; besides we may use antihysteric treatment, drugs and suggestion. In very serious cases, where the patient comes under treatment too late, artificial abortion can, perhaps, not be avoided. *The nature of the disease cannot be made responsible for a fatal end.—Prager Mediz. Wochenschrift.*

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PROF. EBSTEIN gives a very interesting paper on the diagnosis of small quantities of fluid in the pericardium, and early diagnosis of beginning exudative pericarditis. He has been led to his investigation by a nearly forgotten paper of Dr. Rosch (Boston *Med. and Surg. Journal*, 1878, No. 13–14). Dr. Rosch pointed out that the first symptom is dullness of the right fifth intercostal space to percussion. Prof. Ebstein has indeed found in forty-nine cases that this is the safest sign for an early diagnosis. The fluid can first be shown by the dullness of an angle formed by the normal dullness of the heart and the dullness of the liver; this angle coincides as a rule with the right fifth intercostal space.—*Virchow's Archiv.*

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PROF. W. FLEINER gives an excellent paper on the treatment of constipation, of the atonic and especially of the spastic form, with large enemata of oil, as used in Prof. Kussmaul's and his own practice. He recommends to take the best olive oil or poppy-oil, and to inject about a pint slowly into the rectum of the patient, who is lying on his back with his pelvis slightly raised. This is best done when the patient goes to bed, because then the oil spreads more easily over the whole colon, and the clothes are not so apt to get soiled. If in the morning no stool has been effected, this is obtained by an injection of water or of an infusion of fructus anisi stellati. This is repeated the next days until the oil reaches the height of its action, *i.e.*, causes thin stools containing sometimes undecomposed gall. After a pause of a few days, only a little more than half a pint of the oil will do twice a week, or even once a week. A child requires 2-5 ounces, and 1-2 ounces later on. The advantages of the method are explained by the mechanical and chemical properties of the oil. It softens the fæces by imbibition, detaches them from the walls of the colon, and thus has a sedative influence, besides it prevents the excessive absorption of the water of the fæces, and finally, by decomposition and formation of acids it excites peristaltic motion and evacuation in a mild way. This explains why the method is the most rational treatment of the spastic constipation, caused by fissure ani, or more typically in irritable, neurasthenic patients and hypochondriacs, and in women suffering from disease of the genital organs, where a rather long section of the colon may be in a condition of contracture. In such cases massage and strong pur-

gatives do much harm.—*Berliner klin. Wochenschrift, No. 3 and 4, 1893.*

If antisep ic action on inflammatory or ulcerative process should be desired, 1-2 per cent. of salicylic acid may be added to the oil.

GLYCOZONE.

GLYCOZONE is a stable compound resulting from the chemical reaction which takes places when C. P. glycerine is submitted under special conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of O° C.

The presence of water (and other foreign substances) in the glycerine, changes the nature of this reaction, so that instead of producing glycozone, we obtain formic acid, glyceric acid, and other secondary products having deleterious effects upon the animal cells.

Glycozone being hygroscopic, must be tightly corked, so as to avoid being deteriorated by the moisture contained in the atmosphere.

Although glycozone absorbs water readily, it does not deteriorate when kept at a temperature of 110 degrees F. as long as it retains its proper anhydrous condition.

The therapeutic properties of glycozone and Marchand's peroxide of hydrogen (medicinal) differ in the following particulars:

Peroxide of hydrogen (medicinal) instantly destroys the morbid elements of diseased surfaces of the skin or of the mucous membrane with which it comes in contact, leaving the tissues beneath, in a healthy condition.

On the contrary, glycozone acts more slowly, but not less certainly as a stimulant to healthy granulations. Its healing action upon diseased mucous membrane is powerful and harmless in the treatment of inflammatory diseases of the stomach. In such cases it gives an immediate relief to the patient.

In chronic inflammation of the intestines, a rectal injection administered every day with a mixture composed of

℞ Glycozone, ... ʒ1
Lukewarm water, ... ℥12

soon relieves obstinate conditions.

A syringe made exclusively of hard rubber or glass. should be used in all instances where either peroxide of hydrogen (medicinal), or glycozone is used as an enema.

After any diseased or suppurating surface has been cleansed by peroxide of hydrogen (medicinal), the application of glycozone stimulates healthy action, and accelerates a cure.

General directions for use.—Glycozone may be given for diseases of the stomach, in doses of one to two teaspoonfuls in a wine-glassful of water immediately after each meal. In catarrhal diseases, it should be applied in full strength as often as required.

As an application to wounds and suppurating surfaces it should be used without dilution.

Caution.—Glycozone is a peculiar chemical compound, and not a mixture of peroxide of hydrogen (medicinal) with glycerine.

These two liquids when mixed do not form a stable product, but develop substances which have injurious effects upon animal cells.

Such a mixture when freshly made, has no healing properties similar to glycozone. On the contrary glycozone is stable, harmless and always effective.

In *The Practitioner* for January, Wilks contributes a paper on the value of drugs, that is well worth reproducing, had we the space. He objects to the indiscriminate use of the bromides. except in epilepsy, they are of little use. Business anxiety, domestic anoyances, love, whose course will not run smoothly, all are alike treated with bromides. It is also unscientific to persist when a remedy has proved valueless, as in the routine methods for phthisis. Because syphilitic periostitis is amenable to iodide, all bony growths are to be treated by it; though it has no power over them. Splenic leucocythemia is treated by quinine, mercury and iodides, in and out, though these have not the slightest effect on the enlargement. In tuberculous (sic) meningitis the iodide is also given, though without a single cure to its credit

On the other side, among undoubtedly beneficial uses of drugs, he enumerates the cure of exophthalmic goiter by bella-

dona; idiopathic anemia by arsenic; tuberculous peritonitis by good living, milk, wine, quinine, tonics, cod-liver oil, and iodides and mercury to the abdomen, with tincture of iodine; and dysentery and chronic diarrhœa by mineral acids and ipecacuanha, with, perhaps, a little opium.

In the same number of *The Practitioner* are interesting papers from Sir Dyce Duckworth on sick diet, Haig on intestinal gout, Morison on passive congestion of the lungs from heart failure, and McCall Anderson on the treatment of myxœdema. In the section devoted to public hygiene, the question of public water service in relation to enteric fever is considered; Fox writes on softened *versus* hard water, and Huggard gives some useful hints to patients concerning the spread of consumption.

News.

CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, Jan. 20th, 1893.

The 275th regular meeting was called to order by the President, Dr. William E. Moseley.

Dr. Harry Friedenwald exhibited a case of exophthalmos due to idiopathic hemorrhage into the orbit. One morning the patient, a robust negro man, arose feeling quite well. After washing he felt a sudden pain in his eye and found the eye protruding and sensitive. The eye-ball was not at all injected and the only reason for the exophthalmos that could be assigned was an orbital hemorrhage. The movements of the eye-ball were very much restricted. During the next two days the pain was greatly diminished and the movements were increased. The vision of the affected eye has been greatly impaired since the hemorrhage. No blood had yet appeared under the conjunctiva. There are a very great number of cases reported of traumatic orbital hemorrhage with the same symptoms but there are only a few cases of idiopathic hemorrhage on record. The patient's history throws no light upon the cause of the hemorrhage.

Dr. A. Friedenwald remembered a similar case which he had seen in a colored man some years ago. The protrusion of the eye-ball came on very suddenly and could be ascribed to no other cause than orbital hemorrhage. These hemorrhages are by no means innocent, for the pressure which they exert upon the nerve of the eye is very prejudical and explains the rapid decrease in the patient's sight. In traumatic cases an accumulation of blood in the orbit is usually followed by total atrophy of the optic nerve.

Dr. S. T. Earle exhibited a Langdon Rectal Tube. This tube was introduced by Dr. Langdon of the Miami Medical College of Cincinnatti, Ohio. It presents many advantages over the tube ordinarily in use It is five feet in length, being intended to reach from the anus to the caecum. It is found extremely valuable in rectal alimentation as the enemata can be carried up all the way into the large bowel and is not followed by a desire for speedy evacuation as in the case when the nourishment is injected only into the rectum. The enemata by this means come into contact with a larger absorbing surface. Another advantage of this tube is its resistance. It is a ½ inch tube with only a ⅛ inch opening. This prevents the kinking and bending upon itself which is so likely to take place in in the ordinary rectal tube. The opening is at the end and not upon the side. This allows of an easy introduction, as by letting the enemata flow in gradually the bowel is distended in advance of the tube. In cases of fecal impaction this resistance and direct opening are of very decided advantage. This tube can be made to pass the fecal impaction and throw the enemata above the instruction. It is also valuable in the treatment of oxyuris vermicularis. It has been shown by Heller that the habitat of this worm is about the caecum and not about the rectum as has been supposed. By this tube our medicaments can be thrown where they will do the most good.

Dr. Robert W. Johnson related "A Dozen Accident Cases Treated by the Blood-Clot Method:" Three gun-shot wounds, two compound fractures of the skull, two compound fractures of patella, one compound fracture of tibia, one compound dislocation of elbow, one punctured wound of knee-joint, one plastic amputation of breast, one strangulated testicle.

These cases were all eminently successful. They did not represent all of the series of cases treated by this method but only the most successful ones. While the method is not universally successful, still it may often be trusted and when it fails it does not leave the patient in a much worse position than had it not been tried.

Dr. W. S. Halsted congratulated Dr. Johnson upon his cases and thought they were excellent illustrations of what could be done by the method.

There is a point that is not generally understood when the blood-clot is spoken of. Schede, who advocated this method, made use of it to fill up dead spaces in bone to take the place of sponge, decalcified bone, catgut and other foreign materials, and he contradicted the views of Bergman who thought it was absolutely fatal to good results to allow blood to remain in the wounds. He did not, however, ascribe any beneficial antiseptic effects to the blood-clot. He did not know at that time of the experiment sof Nuttall, and of others since Nuttall, which showed that the blood of some animals has the power to destroy germs, such as the typhoid germs, when inocculated with these germs. No one has yet succeeded in killing pyogenic organisms with human blood.

Perhaps the value of the method lies in the fact that we are no longer afraid of blood in a wound and so we do not feel anxious to obliterate dead spaces which are difficult to obliterate and we do not have to prevent very minute arteries from bleeding. We have learned that blood is not very harmful in a wound, but we have not learned that it is a thing to be desired in a wound.

It is best to have a wound as dry as possible and to close it immediately, provided we can have it dry without constricting tissues with our ligatures and sutures. We have become sure that one of the most important things in technique is to avoid the strangulation of tissue. This is more important than the employment of antiseptics, more important than disinfecting the skin of the patient and perhaps disinfecting our own hands, but not more important than disinfecting ligatures.

Dr. J. E. Michael said that similar cases to those related by Dr. Johnson had been treated successfully by other methods. There can be no object in having a blood-clot except where there is a dead spot to deal with. Where wounds can be made clean and approximated without constricting tissue it seems reasonable to so treat them than rather than to introduce an element that may be harmful.

Dr. J. W. Chambers: "We have about come to this conclusion, that a blood-clot is probably less injurious to tissue than a drainage tube; that it does very little harm, whether it does good or not."

Dr. Randolph Winslow believed that wherever there are dead spaces, such as cavities in bone which heal with difficulty by the process of granulation and cicatrization, the blood-clot affords a scaffolding by which the process of repair is very much facilitated. He feels safer in making use of drainage where there are considerable cavities which are liable to be filled with fluids which may decompose, but in small cavities or bone cavities it is frequently desirable to have them filled with blood.

Dr. A. Friedenwald: "A blod-clot always forms after the enucleation of an eye. Before the period of antisepsis, he always expected copious suppuration to follow enucleation, and it never failed. With antisepsis he never has suppuration."

Dr. Johnson said that while the blood-clot will not destroy germs, and he had never intended to give the impression that it would, it will allow us to close up our wounds without too much interference. It is nature's method of filling up dead spaces, and is what occurs in subcutaneous wounds and simple fractures. It enables us to do away with the drainage tube to a great extent, and this is an extremely valuable addition to surgery. It makes each operation simpler. In endeavoring to check the hemorrhage of small oozing by sponge or gauze or other means, we do injury to the tissues. We accomplish a good work by the avoidance of this injury.

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BALTIMORE, Feb. 3d, 1893.

The 276th regular meeting was called to order by the President, Dr. Wm. E. Moseley.

Dr. G. J. Preston exhibited a patient suffering from a peculiar nervous affection of his left arm. The patient, a man of 26 years, has done hard work all his life. He used his left hand rather more than his right. Last October he had a fall and struck on the shoulder and arm of the affected side and the pathological condition developed soon after. The arm is very muscular and there is no evidence of paralysis, no loss of sensation and electric reflex perfectly normal. The patient's hand assumes all sorts of queer positions due to contracture of the muscles and no sooner is one position reduced than another immediately ensues due to the contracture of a different group of muscles. These peculiar phenomena disappear entirely during sleep. Dr. Preston was inclined to believe that the condition was one of hysteria.

Dr. Walter B. Platt read a paper upon the "Factor of Age in Surgical Operations." His conclusions were based upon operations done by himself upon children and aged people. He has never seen any ill effects in children from confinement to bed for weeks and months in hygienic surroundings. They stand confinement to bed and house better than any other age. In them ether anesthesia is quickly induced and consciousness quickly regained. He has never seen any bad effects on the circulatory system during or after the administration of anesthesia.

The only case of shock which he had seen was in a case osteo-myelitis of the femur where a great deal of suppuration had been going on for two or three years. A proportionate hemorrhage is probably better borne by a child than by a adult. Children do not well tolerate an operation where the intestines are long exposed. Old persons having simply the senile changes but being fairly healthy otherwise, can stand operation very well. Confinement to bed is an important matter in old people. If the injury compels them to lie flat on their back, hypostatic pneumonia may put an end to life. They should be watched carefully and propped up if necessary.

Dr. Randolph Winslow reported "Some Cases of Compound Fracture Occurring in Boys."

Dr. J. W. Chambers said that children stand the shock moderately well. He had recently operated on a child in its second week, for double hare-lip with protrusion of the premaxillary. The child was under the anæsthetic for three-fourths of an hour, but there was little or no shock. Children stand loss of blood fully as well as other people. They make blood very rapidly. It is very difficult to say how old people stand shock for the reason that a large number of the old people operated upon are in a pathological condition independent of the condition for which they are operated upon. The tissues of old people heal about as well as those of young persons. If the patient's condition warrants an operation and the heart and lungs and other organs are good the question of age is hardly a factor.

Dr. J. D. Farrar read a paper upon "Intestinal Antisepsis in Typhoid Fever by Means of Bismuth, Subiodide and Salol." He commended the plan in practice at the Cooper Hospital, Camden, N. J. He reported a series of twenty-four cases with no deaths. The bismuth and salol were given in five grain doses, alternately, every three hours, night and day. No toxic symptoms from the drugs were noticed. This method of treatment is begun whenever diarrhœa exists, and is continued throughout the disease. This treatment is thought to modify the severity if it does not limit the duration tion of the disease. Tympanites is reduced, diarrhœa controlled, and hemorrhage prevented.

Dr. Norment said that one of the charts exhibited by Dr. Farrar showed the patient to have had a practically normal pulse, temperature and respiration upon admission, and he thought that the case did not demonstrate so much the benefit of salol and subiodide of bismuth as it did the benefit of convalescence. He thought that further trial was necessary before the utility of the method could be accepted.

W. T. WATSON, *Secretary*.
1519 N. BROADWAY.

The Provincial Medical Journal for February contains a fully illustrated paper by Robert Jones, of Liverpool, and John Ridlon, of Chicago, on hip-joint disease.

PAN AMERICAN MEDICAL CONGRESS.

NEW BY-LAWS.

Languages.—By-Law IX. Papers may be read in any language providing that authors of the same shall furnish the Secretary-General with an abstract not exceeding six hundred words in length in either of the official languages (English, Spanish, French or Portugese), by not later than July 10th, 1893, and providing further, that a copy of each such paper shall be furnished in either of the official languages, at or before the time of the meeting to the Secretary of the Section before which the same shall be read. Remarks upon papers may be made in any language providing that members making such remarks shall furnish a copy of the same in either of the official languages before the adjournment of the session.

Publication.—By-Law X. All papers read either in full or by title shall be immediately submitted for publication in the transactions (Special Regulation 3) but authors may retain copies and publish the same at their pleasure after the adjournment of the Congress.

Constituent Organization.—By-law XI. All medical, dental and pharmeceutical organizations, the titles of which have been transmitted with approval to the Committee on Organization. or which may hereafter be transmitted with approval to the Executive Committee by any member of the International Executive Committee, each for his own country, shall be subject to election to the Executive Committee, approved by the President, as constituent bodies of the First Pan-American Medical Congress, and each organization thus constituted, shall have the right to designate as delegates all of its members attending the Congress, but no such organization shall meet at the time and place of meeting of the Congress as a distinct body. Providing, that the Secretary of each such constituent body shall furnish a list of officers and a statement of the number of members of his respective organization to the Secretary-General, not later than sixty (60) days before the meeting of the Congress, and shall forward a list of delegates chosen to reach the Secretary-General before the opening of the Congress.—*By the Executive Committee, February 22, 1893.*

INFANT FOODS.—It has been quite positively settled that an infant under seven months old cannot digest starchy food. The salivary glands are not yet properly developed, and the secretion of ptyalin, the ferment of the saliva which acts on starch, does not exist until after the above age. It would naturally seem, then, that an all milk food would be the only one to use. As far as I am aware, Reed & Carnrick's Lacto Preparata is the only food of this kind offered to the medical profession or public, and from what I know of its composition, its preparation and the results obtained by its use, I am justified in saying that it is a most excellent substitute for mothers' milk, and is the safest to use during epidemics of typhoid fever, cholera infantum and Asiatic cholera.—Cyrus Edson, in *The Doctor of Hygiene.*

DR. BRUSH'S

KUMYSS

"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

ARCH M. CAMPBELL, M. D.

Farm and Laboratory,

Mt. Vernon, N. Y.